

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraphs beginning at page 22, line 1 and continuing through page 23, line 10, with the following rewritten paragraphs:

Of particular use in the present invention as applied to loci found on human chromosome 4p that are associated with resistance to BPAD are the following:

The primers 5'-AGGCATACTAGGCCGTATT-3' (SEQ ID NO:65) and 5'-TTCCCATCAGCGTCTTC-3' (SEQ ID NO:66), which amplify chromosome markers D4S431 and D4S2366;

The primers 5'-GCTCACAGAAGTGCCCAATA-3' (SEQ ID NO:67) and 5'-CCCTGGGTGAAGTTTAATCTC-3' (SEQ ID NO:68), which amplify chromosome marker D4S2935;

The primers 5'-ATTTTGTCTACATTGGTGACATA-3' (SEQ ID NO:69) and 5'-CTTCAGGTTCTACTAGTTCATGG-3' (SEQ ID NO:70), which amplify chromosome marker D4S3007;

The primers 5'-CCCTTGAGCATCCTGACTTC-3' (SEQ ID NO:71) and 5'-GAGTGAGCCCCTGTACTCCA-3' (SEQ ID NO:72), which amplify chromosome marker D4S394;

The primers 5'-ATCAGGGTTCTCCACACAAA-3' (SEQ ID NO:73) and 5'-TTGGTTGAACTTGTGGATATAAA-3' (SEQ ID NO:74), which amplify chromosome marker D4S1582;

The primers 5'-CATTCTAGTAGTTATATTGGCTTATCC-3' (SEQ ID NO:75) and 5'-CAGTTGCTTGATACCTATATTTTC-3' (SEQ ID NO:76), which amplify chromosome marker D4S1605;

The primers 5'-CCTTACGGATAGGGGCAG-3' (SEQ ID NO:77) and 5'-CTAATGTCCAGGTCTACGGC-3' (SEQ ID NO:78), which amplify chromosome marker D4S2949; and

The primers 5'-AGGTGGCCCTGAGTAGGAGT-3' (SEQ ID NO:79) and 5'-TTTGAGGGAATGATTGGGT-3' (SEQ ID NO:80), which amplify chromosome marker D4S403. These and additional markers are shown in Table 2.

Of particular use for detecting markers that are associated with resistance to BPAD and are found on chromosome arm 4q are the following:

The primers 5'-AATGCTTATCTACCAATGAGTG-3' ([SEQ ID NO:81](#)) and 5'-GTGGCTGGGTAGTATTCATGG-3' ([SEQ ID NO:82](#)), which amplify chromosome marker D4S2423;

The primers 5'-GGCAAGANTCCGTCTCAA-3' ([SEQ ID NO:83](#)) and 5'-TGAAGTAAATTTGGGAGATTGT-3' ([SEQ ID NO:84](#)), which amplify chromosome marker D4S422;

The primers 5'-AGGGAGGTCATCAGTTCATT-3' ([SEQ ID NO:85](#)) and 5'-TGTTGCAAACCTTTGCTTTTC-3' ([SEQ ID NO:86](#)), which amplify chromosome marker D4S397;

The primers 5'-TTCTTTGATTCTTCGGGG-3' ([SEQ ID NO:87](#)) and 5'-TTTCTCAGCAACATTCCTCT-3' ([SEQ ID NO:88](#)), which amplify chromosome marker D4S420;

The primers 5'-TAACATTGACCGCTCCTCTC-3' ([SEQ ID NO:89](#)) and 5'-CATCCTTCCTGGTCCCTAGT-3' ([SEQ ID NO:90](#)), which amplify chromosome marker D4S 1644;

The primers 5'-TAAAACTTCTGAATGAAAAG-3' ([SEQ ID NO:91](#)) and 5'-GTAGGGAGGAATAGTTAG-3' ([SEQ ID NO:92](#)), which amplify chromosome marker UT2147;

The primers 5'-TGCAAAGTGTCACTCAAAAG-3' ([SEQ ID NO:93](#)) and 5'-GCCAAGGCTGATCCTC-3' ([SEQ ID NO:94](#)), which amplify chromosome marker D4S1565;

The primers 5'-GCGCTCTTGGTATATGGTACAG-3' ([SEQ ID NO:95](#)) and 5'-TGTGGGCAACGTCCTC-3' ([SEQ ID NO:96](#)), which amplify chromosome marker D4S424; and

The primers 5'-GACTCCAAATCACATGAGCC-3' ([SEQ ID NO:97](#)) and 5'-GTCTCTGCATTTGCTGGTTT-3' ([SEQ ID NO:98](#)), which amplify chromosome marker D4S 1625. These and additional primers that are useful for amplifying chromosomal markers that identify chromosomal regions associated with increased resistance to BPAD are shown in Table 3.